HUNTSMAN

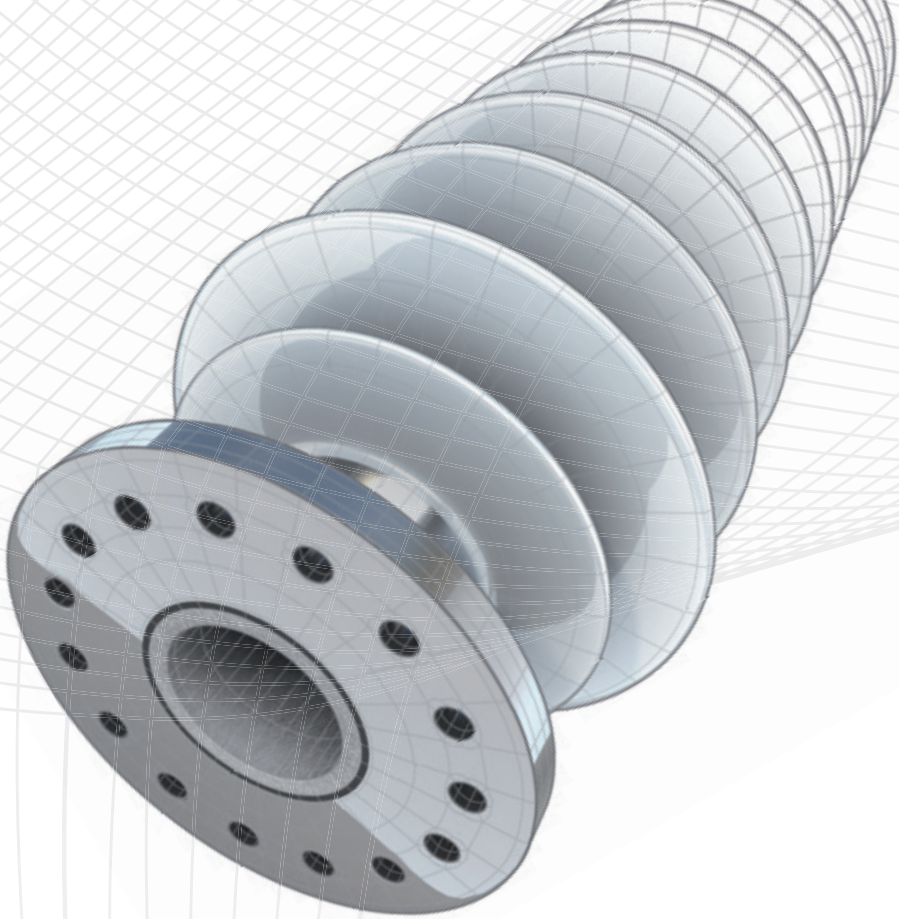
Enriching lives through innovation

Advanced Materials

Reliable and comprehensive insulation solutions

Selector guide for electrical engineering


Rely on
us with
confidence



Araldite®

The original brand serving worldwide electrical engineering for more than half a century.

Rely on us with confidence

For more than 60 years, Huntsman Advanced Materials, has developed innovative solutions that are used during virtually every stage in the production of power applications. Our know-how and expertise allow us to develop a wide range of solutions that answer the most stringent requirements for electrical engineering:

> High thermal resistance and thermal conductivity
> Flame-retardancy (UL94 V0/HB listing and EN/TS 45545 qualifications)
> Excellent mechanical and dielectric properties
> Variable hardness and high dimensional stability
> Good chemical resistance and low water uptake
> Reduced production costs and improved efficiency

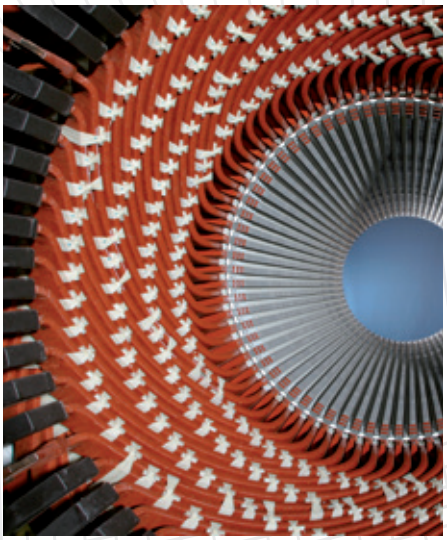
More than just products

All products are tested in-house in our electrical and mechanical testing laboratories to ensure they provide the desired properties and comply with environmental requirements. Our own certified UL laboratory can speed up the approval process and minimize time-to-market. Moreover our global manufacturing footprint including ISO/TS 16494 certified plants in Europe, China and the US and our local technical support teams ensure the highest proximity with our customers.

Reliable and comprehensive solutions for electrical engineering

Generators and motors

Araldite® and Aradur® impregnation systems can be used in all insulation components of motors and generators thanks to their high mechanical strength, the strong adhesion to various metals and substrates and their excellent dielectric properties.



Your needs

> High mechanical strength
> Strong adhesion to various metals and substrates
> Excellent dielectic properties
> Anhydride free

Our solutions

> Araldite® impregnation systems with thermal class F/H

Insulators and bushings

Araldite® and Aradur® casting systems are backed by 40 years of service experience and offers especially good and proven weathering resistance which is required for outdoor applications.

Your needs

> Obtain high cantilever strength
> Void free castings
> Good weathering resistance

Our solutions

> Araldite® cycloaliphatic outdoor systems are backed by 40 years of service experiences
> Araldite® HCEP systems reduce leakage currents and improve reliability and extend life expectancy
> ERIP system, with low exothermic reaction
> Cost effective filament winding systems

Switchgears

Araldite® and Aradur® casting systems can be used in indoor and outdoor applications and fulfill the general requirements for casting systems for switchgear parts which are medium to high glass transition temperature.

Your needs

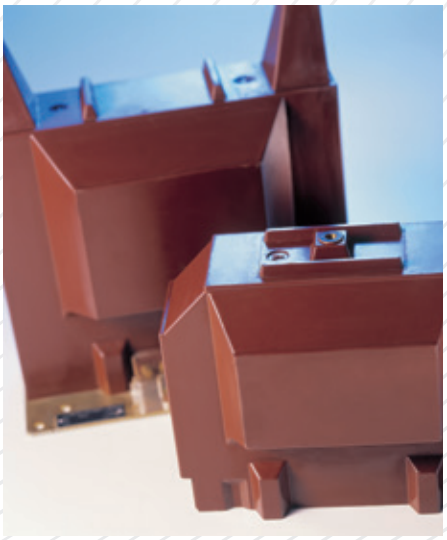
> Medium to high glass transition temperature
> Tg adjusted to service temperature
> High resistance to mechanical creeping
> Good weathering resistance

Our solutions

> Araldite® casting systems with high Tg
> Araldite® HCEP systems reduce leakage currents and improve reliability and extend life expectancy
> Araldite® NPC systems increase productivity

Instrument transformers

One of the major properties of Araldite® and Aradur® casting systems is high crack resistance which is mandatory for instrument transformer castings.



Your needs

> High crack resistance
> Low glass transition temperature
> Good weathering resistance
> Low partial discharge level of castings

Our solutions

> Solid Araldite® resins with 50 years experience
> Flexibilised Araldite® system, Tg adjustable
> Prefilled, toughened systems for indoor and outdoor

Dry-type distribution transformers

The dry-type distribution transformer application is one of the fields where Araldite® systems have gained their long successful experience. Our Araldite® product range fulfills the very demanding requirements on insulation systems which are high crack resistance, slow curing process and a high thermal class.

Your needs

> High crack resistance
> Slow curing process
> High thermal class
> Flame-retardancy

Our solutions

> Araldite® vacuum casting systems with thermal class F/H

Testing, supporting and training services

Material testing and characterisation

Mechanical testings

Tensile, compressive, flexural properties, shore hardness, thermal ageing, cycling under humidity, compressive and flexural properties, HDT, UV-ageing under temperature and humidity, Charpy / Izod pendulum impact testing, tensile shear / peeling, ILSS, creep testing.

Application engineering

Production of sample parts by potting, vacuum casting, automatic pressure gelation (APG), vacuum pressure impregnation (VPI), trickle impregnation, coating technologies, simulation of casting processes.


1


2

3

1. Production site Monthey / Switzerland
2. Automatic vacuum encapsulating equipment
3. Training

Electrical testings

Dielectric strength, dissipation factor, permittivity, inductance / capacitance, resistivity, tracking resistance CTI, electrolytic corrosion, moisture insulation resistance, thermal shock storage, thermal ageing, UV and weathering ageing, UL certification.

Certification

UL certified and participation in CTDP (Client Test Data Program).

Training

We offer a training program aimed at understanding both insulating materials and processing technologies including practical sessions.
Further information on dates and locations available upon request.

Generators and motors

Impregnation systems

Product designation	Mix ratio	Tg	Viscosity	Thermal class	Manufacturing process	Main features
Conditions			25°C			
Norm						
Unit	pbw	°C	mPa·s			
Resin XD 4410	1-component	125	1 500	F	Vacuum pressure impregnation	1-component, excellent dielectric properties. Anydride-free.
Araldite® MY 790-1 CH / Aradur® HY 1102	100 : 100	143	400	H	Vacuum pressure impregnation	Standard system, thermal class H, high Tg.
Araldite® 30790	1-component	143	240	H	Vacuum pressure impregnation	1-component. Same properties as Araldite® MY 790-1 CH / Aradur® HY 1102.
Araldite® CY 192-1 / Aradur® HY 918	100 : 100	92	200	F	Vacuum pressure impregnation	Outstanding arc and tracking resistance, high flexibility and crack resistance.

Insulators and bushings

Monolithic insulators and bushings - Casting systems

Product designation	Mix ratio	Tg	KIC	Manufacturing process	Main features
Conditions					
Norm					
Unit	pbw	°C	mPa·m0.5		
Indoor applications					
Resin XB 5915 / Hardener XB 5916	70 : 100	140	2.7	Automatic pressure gelation, vacuum casting	Toughened, high Tg, wollastonite pre-filled, suitable for MV and HV, high crack resistance.
Araldite® CW 229-3 / Aradur® HW 229-1	100 : 100	115	2.9	Vacuum casting, automatic pressure gelation	Wollastonite prefilled system, low thermal exp. Coefficient, high crack resistance, moderate reactivity, UL 746 B recognition for 200°C service temperature.
Araldite® CY 228-1 / Aradur® HY 918-1 / Accelerator DY 062 / Filler Silica	100 : 100	115	2.1	Automatic pressure gelation	High mechanical and electrical properties, good thermal shock resistance, high filler content possible.
Araldite® NPC systems - No post cure required					
Araldite® CW 229 NPC / Aradur® 229 NPC	100 : 100	115	2.9	Automatic pressure gelation	No post cure grade of Araldite® CW 229-3 / Aradur® HW 229-1, UL 746 B recognition for 200°C service temperature.
Resin XB 5992 / Hardener XB 5993 / Filler Silica	100 : 90 : 350	107	2.1	Automatic pressure gelation	No post cure after demolding, good thermal cycling resistance, saving processing cost.
Outdoor applications					
Araldite® CEP standard systems					
Araldite® CY 184 / Aradur® HY 1235 BD / Accelerator DY 062 / Filler Silica-EST	100 : 90 : 0.6 : 370	110	2.5	Automatic pressure gelation, vacuum casting	Long experience, liquid hardener, also used in severe indoor conditions (pollution humidity), EDF approved (HN-26-E-20).
Resin XB 5918-3 / Hardener XB 5919-3	100 : 100	110	2.6	Automatic pressure gelation, vacuum casting	Core shell toughened outdoor system, prefilled, high crack resistance.
Araldite® HCEP systems with hydrophobic properties					
Araldite® CY 5622 / Aradur® HY 1235 BD / Accelerator DY 062 / Filler Silica-EST	100 : 82 : 0.45 : 355	110	2.5	Automatic pressure gelation, vacuum casting	Hydrophobic cycloaliphatic system with liquid hardener, excellent thermal cycle resistance, hydrophobicity transfer and recovery, extended insulator lifetime, utility approvals. Approved according to EN 45545 for railway applications: best class R23 / HL 3 suited for tunnels.
Resin XB 5957 / Hardener XB 5958	100 : 100	110	2.5	Automatic pressure gelation, vacuum casting	Hydrophobic pre-filled cycloaliphatic system, improved crack resistance, hydrophobicity transfer and recovery, extended insulator lifetime.

Composite insulators and bushings - Impregnation systems

Product designation	Mix ratio	Tg	Viscosity	Flexural strength	Manufacturing process	Main features
Conditions			25°C			
Norm						
Unit	pbw	°C	mPa·s	Mpa		
For rods						
Araldite® MY 740 / Aradur® HY 918-1 / Accelerator DY 062	100 : 85 : 1.3	120	700	160	Pultrusion	Standard system with high mechanical performance.
Araldite® MY 740 / Aradur® HY 5917-2	100 : 85	125	1 000	140	Pultrusion	Decarboxylation-free (low risk of bubble formation), for high quality translucent rods.
Araldite® MY 740 / Aradur® HY 906 / Accelerator DY 070	100 : 95 : 1.2	170	1 500	145	Pultrusion	High Tg system with good mechanical properties.
Araldite® MY 740 / Aradur® HY 1102 BD / Accelerator DY 062	100 : 90 : 0.2	140	1 000	115	Pultrusion	Standard system with variable accelerator amount.
For tubes						
Araldite® MY 740 / Aradur® HY 918-1 / Accelerator DY 062	100 : 85 : 1.3	120	700	160	Filament winding	Standard system with high mechanical performance.
Araldite® MY 740 / Aradur® HY 906 / Accelerator DY 070	100 : 95 : 1.2	170	1 500	145	Filament winding	High Tg system with good mechanical properties.
Araldite® CY 179 / CH Aradur® HT 907 / Accelerator DY 072	100 : 105 : 8.5	155	280	100	Filament winding	Low viscosity standard system for high Tg. Moderate reactivity. System also available with liquid hardener.
Resin XB 5860 / Aradur® HY 1235 BD	100 : 85	130	650	170	Vacuum impregnation	Very good mechanical properties, preaccelerated, moderate reactivity, low exothermic reaction.
Araldite® MY 740 / Aradur® HY 1102 BD / Accelerator DY 062	100 : 90 : 0.2	140	1 000	115	Vacuum impregnation	Standard system with variable accelerator amount.
For resin impregnated paper bushings						
Resin XB 5860 / Aradur® HY 1235 BD	100 : 85	130	650	170	Vacuum impregnation	Very good mechanical properties, preaccelerated, moderate reactivity, low exothermic reaction.
Araldite® MY 740 / Aradur® HY 1102 BD / Accelerator DY 062	100 : 90 : 0.2	140	1 000	115	Vacuum impregnation	Standard system with variable accelerator amount.
Araldite® MY 790-1 CH / Aradur® HY 1102 / Accelerator DY 9577 / Accelerator DY 073-1	100 : 90 : 0.16 : 0.04	143	400	135	Vacuum impregnation	Thermal class H, high Tg. Ultra high voltage bushings.

Switchgears

Indoor systems

Product designation	Mix ratio	Tg	KIC	Manufacturing process	Main features
Conditions					
Norm					
Unit	pbw	°C	mPa·m0.5		
For medium voltage					
Araldite® CW 229-3 / Aradur® HW 229-1	100 : 100	115	2.9	Vacuum casting, automatic pressure gelation	Wollastonite prefilled system, low thermal expansion coefficient, high crack resistance, moderate reactivity, best suited for vacuum casting, UL 746 B recognition for 200°C service temperature.
Araldite® CY 228-1 / Aradur® HY 918-1 / Accelerator DY 062 / Filler Silica	100 : 85 : 0.8 : 345	110	2.1	Automatic pressure gelation, vacuum casting	High mechanical and electrical properties, good thermal shock resistance, high filler content possible.
Araldite® CY 5995 / Aradur® HY 925 / Filler Silica	100 : 80 : 270	120	2.5	Vacuum casting	Toughened system with high mechanical properties and excellent thermal shock resistance.
Araldite® CW 229 NPC / Aradur® HW 229 NPC	100 : 100	115	2.9	Automatic pressure gelation	No post cure grade of CW 229-3/HW 229-1, UL 746 B recognition for 200°C service temperature.
Araldite® NPC / Resin XB 5992 / Hardener XB 5993 / Filler Silica	100 : 90 : 350	107	2.1	Automatic pressure gelation, vacuum casting	No post cure after demolding, good thermal cycling resistance, saving processing cost.
For high voltage					
Araldite® CY 5995 / Aradur® HY 925 / Filler Al 2O3	100 : 87 : 400	120	2.3	Automatic pressure gelation, vacuum casting	Toughened system for GIS HV.
Resin XB 5950 / Hardener XB 5951 APG	100 : 100	130	2.0	Automatic pressure gelation	Alumina prefilled system for high voltage GIS applications with high Tg and high mechanical properties.

Outdoor systems

Product designation	Mix ratio	Tg	KIC	Manufacturing process	Main features
Conditions					
Norm					
Unit	pbw	°C	mPa·m0.5		

For medium voltage

Araldite® CEP standard systems					
Araldite® CY 184 / Aradur® HY 1235 BD / Accelerator DY 062 / Filler Silica-EST	100 : 90 : 0.6 : 370	110	2.5	Automatic pressure gelation, vacuum casting	Long experience, liquid hardener, also used in severe indoor conditions (pollution humidity), EDF approved (HN-26-E-20).
Resin XB 5918-3 / Hardener XB 5919-3	100 : 100	110	2.6	Automatic pressure gelation, vacuum casting	Core shell toughened outdoor system, prefilled, high crack resistance.
Araldite® HCEP systems with hydrophobic properties					
Araldite® CY 5622 / Aradur® HY 1235 BD / Accelerator DY 062 / Filler Silica-EST	100 : 82 : 0.45 : 355	110	2.5	Automatic pressure gelation, vacuum casting	Hydrophobic cycloaliphatic system with liquid hardener, excellent thermal cycle resistance, hydrophobicity transfer and recovery, extended insulator lifetime, utility approvals. Approved according to EN 45545 for railway applications: best class R23 / HL 3 suited for tunnels.
Resin XB 5957 / Hardener XB 5958	100 : 100	110	2.5	Automatic pressure gelation, vacuum casting	Hydrophobic pre-filled cycloaliphatic system, improved crack resistance, hydrophobicity transfer and recovery, extended insulator lifetime.

Instrument transformers

Systems for medium voltage

Product designation	Mix ratio	Tg	KIC	Manufacturing process	Main features
Conditions					
Norm					
Unit	pbw	°C	mPa·m0.5		
Indoor applications					
Araldite® CW 229-3 / Aradur® HW 229-1	100 : 100	115	2.9	Vacuum casting, automatic pressure gelation	Wollastonite prefilled system, low thermal expansion coefficient, high crack resistance, moderate reactivity, best suited for vacuum casting, UL 746 B recognition for 200°C service temperature.
Araldite® CY 5538 / Aradur® HY 5571-1 / Filler Silica	100 : 100 : 390	55	3.0	Vacuum casting	Low viscosity, low Tg, high filler load.
Araldite® CY 228-1 / Aradur® HY 918-1 / Flexibilizer DY 045 / Accelerator DY 062 / Filler Silica	100 : 85 : 20 : 0.8 : 385	70	2.7	Automatic pressure gelation, vacuum casting	Standard, low viscosity, high filler load. DY 042 available as flexibiliser with improved toughness.
Outdoor applications					
Araldite® CEP standard systems					
Resin XB 5918-3 / Hardener XB 5919-3	100 : 100	110	2.6	Automatic pressure gelation, vacuum casting	Core-shell toughened outdoor system, prefilled, high crack resistance.
Araldite® CY 184 / Aradur® HY 1235 BD / Flexibilizer DY 044 / Accelerator DY 062 / Filler Silica	100 : 90 : 20 : 0.6 : 410	80	3.0	Automatic pressure gelation, vacuum casting, rapid automatic pressure gelation	Excellent mechanical and dielectrical properties, good thermal chock, high resistance to erosion under UV, high tracking and arc resistance.
Araldite® HCEP systems with hydrophobic properties					
Araldite® CY 5622 / Aradur® HY 1235 BD / Accelerator DY 062 Filler / Silica-EST	100 : 82 : 0.45 : 355	110	2.5	Automatic pressure gelation, vacuum casting	Hydrophobic cycloaliphatic system with liquid hardener, excellent thermal cycle resistance, hydrophobicity transfer and recovery, extended insulator lifetime, utility approvals.
Resin XB 5957 / Hardener XB 5958	100 : 100	110	2.5	Automatic pressure gelation, vacuum casting	Hydrophobic cycloaliphatic system with liquid hardener, improved crack resistance, hydrophobicity transfer and recovery, extended insulator lifetime.

Dry-type distribution transformers

Product designation	Mix ratio	Tg	KIC	Thermal class	Manufacturing process	Main features
Conditions						
Norm						
Unit	pbw	°C	mPa·m0.5			
Araldite® CW 229-3 / Aradur® HW 229-1	100 : 100	115	2.9	H	Vacuum casting	Wollastonite prefilled system, low thermal expansion coefficient, high crack resistance, moderate reactivity, UL 746 B recognition for 200°C service temperature.
Resin XB 5942 / Hardener XB 5943	100 : 100	55	2.4	F	Vacuum casting	Prefilled, low viscosity, low Tg system to meet IEC 60076-11 requirements F1 E2 C2.
Araldite® CY 5538 / Aradur® HY 5571-1 / Filler Al(OH)3 / Silica	100 : 100 : 310 : 80	55	2.1	F	Vacuum casting	Suitable for flame retardant cast resin transformers fulfilling IEC 60076-11 F1 E2 C2, low viscosity, low Tg, high filler load.
Araldite® CY 5980 / Aradur® HY 5980 / Accelerator DY 061 (glass fiber)	100 : 95 : 0.2	100	-	H	Vacuum impregnation	high thermal stability low viscosity system, high glass fiber load possible.
Araldite® CY 5948 / Aradur® HY 926 / Filler Silica	100 : 80 : 350	85	2.8	200	Vacuum casting	UL 746 B recognition for 200°C service temperature. Additional hardeners HY 925 and HY 925-1 available for different reactivities.
Araldite® CY 225 / Aradur® HY 227 / Filler Silica	100 : 100 : 300	65	3.0	F	Vacuum casting	Standard system with long experience, low Tg, very high crack resistance.
Araldite® F / Aradur® HY 905 / Flexibilizer DY 040 / Accelerator DY 061 / Filler Silica	100 : 100 : 10 : 1 : 410	95	2.8	F	Vacuum casting	Multi purpose standard system with long experience, low Tg, high crack resistance.

Ancillaries

Coloring pastes

Product designation	Benefits
Araldite® DW 0131 / RAL 1013 (white)	Uniform and homogenous coloration. Minor effects on the processing and endproperties of a casting resin system. Light and heat resistance. Pigment particle size below 50 µm.
Araldite® DW 0133 / RAL 3000 (red)	
Araldite® DW 0136 / RAL 80 16 (brown)	
Araldite® DW 0137-1 / RAL 8022 (black)	
Araldite® DW 0138 / RAL 7035 (grey)	
Araldite® DW 0139 / RAL 3000 (red)	
Araldite® DW 9134 / RAL 7035 (grey)	

Flexibilisers

Product designation	Color	Color Index	pH value	Viscosity	Benefits
Conditions	visual	APHA	5% in water; 23°C	dynamic 25°C	in combination with Araldite® epoxy resin systems
Norm		ISO 6271; DIN EN 1557:1997	ISO 787-9	ISO 12058	
Unit				mPa·s	
Flexibiliser DY 040	clear liquid	< 50	4.0 - 7.0	60 - 90	Addition up to 20% possible.
Flexibiliser DY 042 NEW	clear liquid	< 30	5.0 - 7.0	45 - 65	Low viscosity, provides superior toughening properties while manufacturing same Tg. Solvent free polyglycol.
Flexibiliser DY 044	clear liquid	< 60	4.0 - 7.0	150 - 200	Addition up to 20% possible.
Flexibiliser DY 045	colorless liquid	< 15	5.0 - 7.0	80 - 105	Addition up to 20% possible.

Release agents

Product designation	Benefits
RenLease® QZ 13	Optimum release effects. Economical. Only slight soiling of mold. Allows smooth demolding even at mold temperatures above 150°C (APG) Enables precise reproduction of surface detail. Short drying times. No corrosion of Araldite® epoxy or metal molds.
RenLease® QZ 23	Optimum release effects. Enables precise reproduction of surface detail, contours. Allows smooth demolding at mold temperatures up to 250°C. Economical. Fast drying times. Multiple demold. Does not corrode Araldite® epoxy or metal molds.
RenLease® QZ 24	Optimum release effects. Enables precise reproduction of surface detail, contours. Allows smooth demolding at mold temperatures up to 250°C. Economical. Fast drying times. Multiple demold. Does not corrode Araldite® epoxy or metal molds.
RenLease® QZ 66	Solvent-free mold release agent. Improved working hygiene.Optimum release effects. Enables precise reproduction of surface detail, contours. Allows smooth demolding at mold temperatures up to 250°C. Little amount needed for good release. Fast drying times. Does not corrode Araldite® epoxy or metal molds. Multiple demold.

Cleaning agent

Product designation	Benefits
Ara® Ecocleaner NEW	Suitable alternative to solvents such as acetone, methylene chloride or NMP. High Flash Point. Readily biodegradable. No hazard label. Recycling by filtering. Flash point 103°C. Vapour pressure (20°C) of 25 Pa.

Adhesives

Product designation	Color	Mix ratio	Mix viscosity	Pot life	Cure time to LSS = 1 N/mm²	Lap shear strength	E-modulus	Elongation at break	Benefits
Conditions			RT	23°C, 100g	23°C	Aluminium	23°C	23°C	
Norm									
Unit		pbw	mPa·s	min	min	N/mm²	N/mm²	%	
Araldite® 2011	yellow	100 : 80	40 000	100	420	26	1 900	9	Multi purpose. Long working life. Good resistance to dynamic loading.
Araldite® 2014-1	grey	100 : 50	thixotropic	60	180	19	4 000	0.7	High temperature and chemical resistance. Low shrinkage. Excellent adhesion on metals and composites. It has a CTI of 600V which is the maximum rate according to the IEC 60112.
Araldite® 2033	black	100 : 88	thixotropic	120 - 140	240	16	576	39	Self extinguishing. Gap filling. Medium open time. High strength. Flammability class: UL 94 V-0 (4,5 mm), NF 16-101/102 I2F2, PrCEN/TS 45545-2.
Araldite® 2048	red	100 : 10	thixotropic	10	15	24	350	90	High elongation at break and lap shear. Optimum pot life / handling time ratio.
Araldite® 2052-1	red	100 : 12	thixotropic	15	20	24	1 750	7	Very high temperature and chemical resistance. Tolerant to «less than ideal» pretreatment. Excellent adhesion on metals, many thermoplastics, glass and ceramics.
Araldite® AV 4415 / Hardener HV 4416	dark grey	100 : 50	120 000	90	24h	1.6	n.a.	n.a.	Temperature resistant to 180°C Excellent resistance to most common chemicals. Non flowing paste for ease of application. Gap filling. Bonds a wide range of substrate materials. Post cure recommended for optimum properties. KIWA potable water approved. FPI Europe approved.

Application technologies

Process 1-2 = Casting I Process 3-4 = Impregnation

Why using this process ?	Which criteria need to be considered for the selection of a resin system ?	What are the typical applications ?
1. Vacuum casting		
Ensuring perfect impregnation of high voltage windings **Reliable electrical insulation** **Excellent chemical and mechanical protection** **Short cycle times** **Fully automatic continous production lines** **Mass production with highest productivity**	Excellent impregnation and gap filling capability Low viscosity for easy processing High crack resistance Low coefficient of thermal expansion High thermal durability (thermal class) High dielectric strength High heat conductivity Sedimentation stability Supply in bulk container	Insulators Bushings Stators / Rotors
2. Automated Pressure Gelation (APG)		
Short cycle times **Void free castings** **Shrinkage compensation** **Feeding of clamping machines over ring lines with central resin system preparation**	Low viscosity for easy processing Sedimentation stability Fast demolding and curing Thermal class High crack resistance Low coefficient of thermal expansion High heat conductivity	Insulators Bushings Stators / Rotors Switchgears
3. Trickle impregnation		
Ensuring void-free impregnation of windings **No loss of impregnating resin** **Automatic trickle machines for continous process** **Excellent bonding and mechanical fixation** **Good heat dissipation**	Solvent-free resins Thermal class High tracking resistance and dielectric strength High mechanical strength High humidty and chemical resistance Humidity	Small motors for hand tools and household appliances Stators / Rotors
4. Vacuum Pressure Impregnation (VPI)		
Ensuring void-free impregnation **Reliable electrical insulation with lowest partical discharges** **Excellent bonding and mechanical fixation** **Good heat dissipation**	Low viscosity Stable viscosity 1-/2-component systems Thermal class High tracking resistance and dielectric strength Humidity and chemical resistance	Large motors and generators

More than just products

With innovation

Every day, all over the world, our Technical Competence centers engage in intensive research and development focusing on one goal; to deliver innovative solutions by working hand-in-hand with our business partners. Together through a continual exchange of ideas, supported by an experienced team of sales and technical specialists, we strive to deliver innovative solutions.

We track both new market expectations and changing regulations. Protection of the environment, as well as health and safety are paramount concerns that play an integral part in our development projects.

By providing certified technologies and patented products in combination with high quality and reliability, our chemists and experts bring enhanced value to our customers to ensure their success.

With customer intimacy

We market a unique product portfolio and a broad range of forward-looking solutions for our customers. Customers and partners benefit from an advanced level of service in:

> Product development and quality control
> Product trials in-house and with customers
> Customer seminars and training
> Trouble-shooting and problem-solving

Partnership with our customers is more than simply «putting them first». It requires long-term commitment to forge close relationships that create synergies of knowledge, security and adaptability to create a successful, shared future.

With care

Sustainability is a fundamental part of our corporate and business strategy. We see a better world in which our innovations help reduce consumption of natural resources and improve the quality of life for people everywhere. We are identifying the long-term trends that affect our markets and looking at how our products and applications can play a part in supporting and providing solutions to the challenges those markets face.

We value your challenge

Huntsman Advanced Materials

Our Advanced Materials division is a leading global chemical solutions provider with a long heritage of pioneering technologically advanced epoxy, acrylic, phenolic and polyurethane-based polymer products.

Our capabilities in high-performance adhesives and composites, delivered by more than 1 600 associates, serve over 2 000 global customers with innovative, tailor-made solutions and more than 1 500 products which address global engineering challenges.

We operate synthesis, formulating and production facilities around the world

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HUNTSMAN

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Ref. No. Electrical engineering selector guide 06.17_EN_EU

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OUR COMMITMENT TO SUSTAINABILITY

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